13. The nanoparticle according to claim 12, wherein the dopant is selected from Ag and Cu.

14. The nanoparticle according to claim 1, wherein the nanoparticle material is InAs and said dopant is selected from Ag and Cu.

15. The nanoparticle according to claim 1, wherein the number of dopant atoms dispersed in the nanoparticle ranges from 1×10^{18} atoms per cm^3 to 1×10^{23} atoms per cm^3.

16. The nanoparticle according to claim 1, wherein the number of dopant atoms per nanoparticle is between 2 to 500.

17. The nanoparticle according to claim 1, wherein the nanoparticle is

a n-doped material having negative charge carriers, or

a p-doped material having positive charge carriers.

18. A device comprising a nanoparticle according to claim 1, wherein the nanoparticle is incorporated into a layer and/or a region of the device.

19. The device according to claim 18, wherein the device is a bipolar transistor in a form selected from n-p-n, p-n-p and n-i-p type transistor.

20. The device according to claim 18, wherein the device is selected from a diode; a transistor; an electronic circuit component; an integrated circuit; a detector; a switch; an amplifier; a transducer; a laser; a tag; a biological tag; a photoconductor; a photodiode; a photovoltaic cell; a light emitting diode (LED); a light sensor; a display; and a large area display array.

21. A method for manufacturing a doped semiconductor nanoparticle, said method comprising

providing an undoped nanoparticle comprising a semiconductor material, and

contacting said undoped nanoparticle with at least one doping material under conditions permitting dispersion of at least two atoms of said doping material within said semiconductor material to form a doped semiconductor nanoparticle that is doped with at least two atoms of a dopant material, wherein

said at least two atoms of the dopant material are heterovalent to atoms of said semiconductor material, and

the doped semiconductor nanoparticle is free of dopant islands within the doped semiconductor nanoparticle and free of dopant islands on the surface of the doped semiconductor nanoparticle.

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